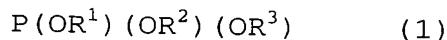


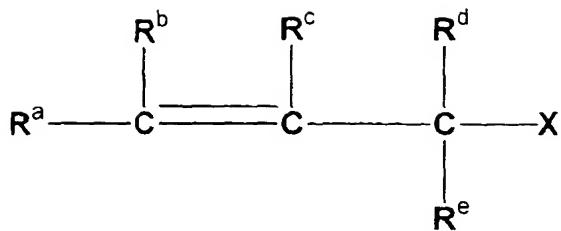
WHAT IS CLAIMED IS:

1. A method for producing an allyl compound having a compositional formula different from that of an allyl starting material compound, which comprises reacting the  
5 allyl starting material compound with an oxygen nucleophilic agent having a structure different from that of the allyl starting material compound in the presence of a catalyst containing at least one transition metal compound containing a transition metal selected from the  
10 group consisting of transition metals belonging to Group 8 to Group 10 of the Periodic Table and a monodentate phosphite compound having a structure of the following formula (1):



15 wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are respectively independently an alkyl group which may have a substituent, carbon chains of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> may have at least one carbon-carbon double bond or triple bond, and at least two optional groups of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> may bond to each other to form at  
20 least one cyclic structure.

2. The method for producing an allyl compound according to Claim 1, wherein the allyl starting material compound has a structure of the following formula (a):



wherein R<sup>a</sup> to R<sup>e</sup> are respectively independently a hydrogen atom, a halogen atom, a hydroxyl group, an amino group, a formyl group, an alkyl group, an aryl group

5 (including a heterocyclic compound forming an aromatic 6π electron cloud on the upper and lower sides of the ring, hereinafter the same), an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an amide group, an acyl group or an acyloxy group; among these groups, the  
10 amino group, the alkyl group, the aryl group, the alkoxy group, the aryloxy group, the alkylthio group, the arylthio group, the acyl group or the acyloxy group may have a substituent; and when any of R<sup>a</sup> to R<sup>e</sup> has a carbon chain, the carbon chain may have at least one carbon-  
15 carbon double bond or triple bond;

X is a halogen atom, a hydroxyl group, a nitro group, an amino group, a sulfonyl group, a sulfonate group, an acyloxy group, a carbonate group, a carbamate group, a phosphate group, an alkoxy group or an aryloxy group;

20 among these groups, the amino group, the sulfonyl group, the sulfonate group, the acyloxy group, the carbonate group, the carbamate group, the phosphate group, the alkoxy group and the aryloxy group may have a

substituent; when X has a carbon chain, the carbon chain may have at least one carbon-carbon double bond or triple bond; and

at least two optional groups among R<sup>a</sup> to R<sup>e</sup> and X may  
5 bond to each other to form at least one cyclic structure.

3. The method for producing an allyl compound according to Claim 1, wherein the oxygen nucleophilic agent is a compound different from a substituent X and its proton adduct X-H eliminated from the allyl starting material  
10 compound by reaction, and is a compound containing an oxygen atom expressed by AO-H or its deprotonated form of AO<sup>-</sup>, in which A is a hydrogen atom or an organic group having a carbon atom, a nitrogen atom, a phosphorus atom or a sulfur atom bonded to an oxygen atom.  
15 4. The method for producing an allyl compound according to Claim 1, wherein the transition metal compound is at least one compound selected from the group consisting of a ruthenium compound, a rhodium compound, an iridium compound, a nickel compound, a palladium compound and a  
20 platinum compound.

5. The method for producing an allyl compound according to Claim 1, wherein at least one of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> of the monodentate coordinated phosphite compound of the formula  
(1) is a branched chain-like alkyl group or a cycloalkyl  
25 group.

6. The method for producing an allyl compound according to Claim 1, wherein the transition metal compound is a

palladium compound.